



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,110	01/29/2002	Toru Fujita	NGB-102	1211

7590

02/24/2006

MATTINGLY, STANGER & MALUR, P.C.
SUITE 370
1800 DIAGONAL ROAD
ALEXANDRIA, VA 22314

EXAMINER

ROGERS, SCOTT A

ART UNIT PAPER NUMBER

2627

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/058,110	Applicant(s) FUJITA, TORU	
	Examiner Scott A. Rogers	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1,2,6,7 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 8-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/22/02 & 2/26/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Asai (JP 11177821 A).

Referring to claim 1:

Applicant discloses acknowledges in the admitted prior art (pages 1-7), the known use of electrophotographic apparatus for reproducing a picture by expressing a gradation of the picture by use of halftone spots which are each formed by dot pictures within a plurality of pixels, said electrophotographic apparatus comprising a picture reproducing engine for forming the dot pictures by attaching toner to virtual dot areas each within the pixel and an image processing unit for causing growth of halftone spots.

While not disclosed in the admitted prior art, Asai discloses a method for causing growth of halftone spots (PD) of a first group in a first data range (GR1) of input image data to increase a gradation of the dot picture, and growth of halftone spots (CD) of a second group in a second data range (GR2) of the input image data, which is adjacent to higher gradation level side of said first data range to further increase the gradation of the dot pictures; wherein the gradation of the dot pictures is simply increased without

decrease at a boundary between said first and second data ranges. See discussion of Figs. 7 and 8.

Referring to claim 2:

In Asai, the density of the halftone spots of said second data range is larger than a density of the halftone spots of said first data range. See discussion of Fig. 1.

It would have been obvious to one of ordinary skill in the art to have provided in the admitted prior art electrophotographic apparatus, the image processing taught by Asai, as identified above, in order to improve the image appearance in the comparatively low tonal range.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Asai.

Referring to claim 6:

Asai discloses a method for reproducing a picture by expressing a gradation of the picture by use of halftone spots which are each formed by dot pictures within a plurality of pixels, said image processing method comprising steps of: growing halftone spots (PD) of a first group in a first data range (GR1) of input image data to increase a gradation of the dot pictures; growing halftone spots (CD) of a second group in a

second data range (GR2) of the input image data, which is adjacent to higher gradation level side of said first data range to further increase the gradation of the dot pictures; and simply increasing the gradation of the dot pictures without decrease at a boundary between said first and second data ranges. See discussion of Figs. 7 and 8.

Referring to claim 7:

In Asai, the density of the halftone spots of said second data range is larger than a density of the halftone spots of said first data range. See discussion of Fig. 1.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai as applied to claims 6-7 above, and further in view of well known prior art.

Referring to claims 11-12:

While Asai does not disclose a program which causes a computer to execute an image processing method as set forth in claims 6-7, it would never the less have been obvious to one of ordinary skill in the art to have provided such a program in view of Asai and well known image processing programs. Providing the image processing method in Asai as a computer program offers the advantages inherent to use of computer software.

Claim Rejections - 35 USC § 101

Claims 11-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 11-15 are drawn to functional descriptive material NOT claimed as residing on a computer readable medium. MPEP 2106.IV.B.1(a) (Functional Descriptive Material) states:

“Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.”

“Such claimed data structures do not define any structural or functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure’s functionality to be realized.”

Claims 11-15, while defining a program which causes a computer to execute an image processing for reproducing a picture . . . , do not define a “computer-readable medium” and is thus non-statutory for that reasons. A computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on “computer-readable medium” in order to make the claim statutory.

“In contrast, a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.” See MPEP 2106.IV.B.1(a).

Allowable Subject Matter

Claims 3-5 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 16-17 are allowed over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Rogers whose telephone number is 571-272-7467. The examiner can normally be reached Monday through Friday 6:00am-2:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Moore can be reached at 571-272-7437.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service at 571-272-2600. Official correspondence by facsimile should be sent to 571-273-8300. The USPTO contact Center phone numbers are 800-PTO-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

19 February 2006


SCOTT ROGERS
PRIMARY EXAMINER